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**IN THE CLAIMS**

Please substitute the following amended claims for the corresponding original claims. A marked copy of the claim amendments is attached hereto.

1. (amended three times) A substrate processing chamber comprising:
- (a) a support;
  - (b) a gas distributor;
  - (c) a gas energizer;
  - (d) a wall comprising a radiation transmitting portion;
  - (e) a mask overlying the radiation transmitting portion and extending into the interior of the process chamber, the mask having an aperture comprising an aspect ratio that is selected to reduce deposition of process residue on the radiation transmitting portion; and

- (f) an exhaust,

whereby a substrate held on the support may be processed by process gas distributed by the gas distributor, energized by the gas energizer, and exhausted by the exhaust, and whereby radiation may be transmitted through the aperture of the mask and the radiation transmitting portion.

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12. (twice amended) A substrate processing chamber comprising:

(a) a support having a receiving surface capable of supporting a substrate;

(b) a gas distributor capable of providing process gas in the chamber and a gas energizer that is capable of coupling energy to the process gas;

(c) a wall comprising a radiation transmitting portion that allows radiation to be transmitted therethrough to monitor processing of the substrate;

(d) a mask overlying the radiation transmitting portion and extending into the interior of the chamber, the mask having an aperture comprising an aspect ratio that is selected to reduce deposition of process residue on the radiation transmitting portion, the aspect ratio being from about 1:1 to about 12:1; and

(e) an exhaust capable of exhausting process gas from the chamber.

19. (amended three times) A substrate processing chamber

comprising:

(a) a support;

(b) a gas distributor;

(c) a gas energizer;

(d) a wall comprising a radiation transmitting portion comprising a mask extending into the interior of the chamber, the mask having a plurality of apertures, the apertures having an aspect ratio that is selected to reduce deposition of process residues on the radiation transmitting portion; and

(e) an exhaust;

whereby a substrate held on the support may be processed by process gas distributed by the gas distributor, energized by the gas energizer, and exhausted by the exhaust, and whereby radiation may be transmitted through the apertures and the radiation transmitting portion.

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26. (twice amended) A window capable of being mounted on a process chamber, the window comprising:

a radiation transmitting portion adapted to be mounted on a wall in the process chamber; and

an overlying mask adapted to extend into the interior of the chamber, the overlying mask comprising a plurality of apertures having an aspect ratio that is selected to reduce deposition of process residues on the radiation transmitting portion,

whereby radiation may be transmitted through the window when a substrate is processed in the process chamber.

129. (amended)) A substrate processing chamber comprising:

(a) a support having a receiving surface capable of supporting a substrate;

(b) a gas distributor capable of providing process gas in the chamber and a gas energizer that is capable of coupling energy to the process gas;

(c) a wall comprising a radiation transmitting portion that allows radiation to be transmitted therethrough to monitor processing of the substrate;

(d) a mask overlying the radiation transmitting portion and extending into the interior of the chamber, the mask having an aperture comprising an aspect ratio that is sufficiently small to allow ions of the energized gas to enter the aperture and etch away the process residues formed on a sidewall of the aperture and the radiation transmitting portion to reduce deposition of process residue on the radiation transmitting portion, the aspect ratio being from about 0.25:1 to about 3:1; and

(e) an exhaust capable of exhausting process gas from the chamber.